POLYMORPHISMS IN THE FCER1A GENE

```
AAACAGAAGA ATTAGTAAAG GAATCCTGGA GAAAGCCCCT GCTGTGTATT
TAAAGGAGAA AGGGAGATCA TGTTGGGAAA TTATAATATT AAAAGTAAAC        100
AAAAGCTAGG AAGTAAAATA AAATAAATTA TATGGCCTAG ATCCCCATAA
GTAATGGTTT AACTTCTGCC TTCCTGTGTT CTGAGCCAGA TTAGGGCACA        200
GTAGAGAAAG AGGAGTCTCT GAAAATGTTT CCAATTTCGC TGGTCAGACA
GCGGATCATC AGTGAATCAG ATGAAAATTT GTGGATTTAT GCACTAACTG        300
ATCAGCAGGA AATTAAACAA GAAAAGCGTT GGTAGCTCTG GTGAATCCCA
AAAGAATTTG GCAGTTGCTA GCCATGCTCC TGAATATGTA TAAACAGTAC        400
ATCATATGAC TAAGAGTTTG ACTTAGGGGT TAGATTTTAT GTGTTTGAAC
CCCAAATTAG TTATTTAATA GTTGGCACCC CAAAACAAGT TACTTAACCT        500
CACTAAGATT CAGTTTTCCT GTTTATAAAA TGTAGATAGT GATAGTATGT
ACTTTATAGG ATTATTGTGA AAAATAAATG AAATATCAGA TTTATTTAGG        600
                                     G

ATAACACCTG GCATATGTTT GGTATTCAGT AATTAGTTGC TGCTGTTTTA
TTCTGCTCTC CCTTGCATCC CACTTTTCTA AGTTGTAAAC TAAATAGTTG        700
      C
TACACAGATT GACAGATTAA GAAAGGCTTG TGATTGTGCT AGACCTATGC
CTCTCTCTCA CCAGATTCCA GGTGTATATG TGGAGGTGGG ATAGGGAGTG        800
GAGTAAGTGG GTAAATATTA AATTGCCCAG TTGGGCACCA TCCTGAATAT
TATCTCTAAA GAAAGAAGCA AAACCAGGCA CAGCTGATGG GTTAACCAGA        900
TATGATACAG AAAACATTTC CTTCTGCTTT TTGGTTTTAA GCCTATATTT
      C          T
GAAGCCTTAG ATCTCTCCAG CACAGTAAGC ACCAGGAGTC CATGAAGAAG       1000
ATGGCTCCTG CCATGGAATC CCCTACTCTA CTGTGTGTAG CCTTACTGTT
      [exon 2: 1001..
CTTCGGTAAG TAGAGATTCA ATTACCCCTC CCAGGGAGGC CCAAATGAAT       1100
                         A
         ..1055]
TTGGGGAGCA GCTGGGGTAG GAACCTTTAC TGTGGGTGGT GACTTTTTCT
AGGACATGTG CAAACTATTG GGCATTTCCC AGGGACTCTG TAGTGGAGCC       1200
AAGCTAGAAA GCAGAGGCAA GTGGGCTGAG CAACACCTAA GGAGGAAGCC
AGACTGAAAG CTTGGTTCCT TGCATTTGCT CTGGCATCTT CCAGAGTGCA       1300
AATTTCCTAC CAAGGTAATG AGGGTAGAGG AGAGAAAGAA GCTCTTTCTT
CCCCTGATTC TCATTCCTGA AAAGACGGTT GGTCCTTAAA ATTCCATGGA       1400
TGTAGATCTT ATCCCCACAC CCAGATTCTA GTCCTCTGGA GATAAAGAAG
ACTGCTGGAC ACTAATGTAT CCTCTCTGGA CTTTTGCAGC TCCAGATGGC       1500
                C          A
      [exon 3: 1490..
GTGTTAGCAG GTGAGTCCTC TGTTCTTGTT CCCTTGGTGT ATCAACATGT
                ..1510]
CTGGGCATTG CTTTCCTCTC ACTATTTTCT TCGTCCCATC ACTTCTGCTT       1600
TCTAATGAGC ATGAATCTGT TCCTTGGCCA GACTACTTTC CCTCTCCACC
      T
TTGCCTTGTC TTTCTTTTTT TCCCTGATTC ATTGCATTCT CTCAAGTCAT       1700
TCTCTCCTCT GTTTTAGTCA ATAACCATGT CTGTTGCACA TATACATGTC
TCATTCTCTC TCCTAGACAC TTTGGCATGA TCTCGCTCAA TAATTACATT       1800
ATTATTATTA TTGCCATTTT ATAATTGAGG ATGCTGAAAC TCAGTGATTT
TCTGGTGGTT ACATGGCTAA GGAACTGGAT TTCAACGTAA GTTCCTTGGA       1900
TCTAAGTCCA GTTCTCTTCT GACTATATCA CCCTTTTGTT ATCACCATGT
ATCTACTTCT TTGGTCTCTG TTCAAATTTG CACTACATCC CCTTGTTCCA       2000
GGAAGCCATT CAAGACTGAC TTTCTTAGTG CCTCTCACTA CTTTCTGGAA
```

FIGURE 1A

```
CTGACATATG TTTTTCACTC TGTATATACT TACAATTAAA TAGTCATAAA          2100
TATTCAGAGC TTGGAGAAAC CTTATATTTC ATCCAGTCCA GTAAATTTAT
CCATCCATAA TTCACTCATT CATTCACATA ATAAATATTT AATGTAACAA          2200
TGGTTGAACA TGGCAGACAG TGTTTCTACC TCAAAAGAGA TTGCAGTCCT
CATTTACAGA TACTGAATTG AAATTAACAG AAGTAGAGTG AGTCAGCTCA          2300
AATCACATAG TGAATTGGTT TCTTTGTTTT TAAATCTCCT GCATATGTGT
CCTGTCTTTC TCCCTGTGTT GGGCGTTCCC TGGGGCACCA ATACTAATTT          2400
CTCCTTCCCC TAGAAATCAA AACAGGGTCT TATCACCAAC AGAATAAGGA
                               G
CAGGTTGACC ACTGATTGTC AGAATATTGC TTCGTTTGTA CTTTTAAGCC          2500
TAGACAGTTT TCAATGACTT TTTTTCTCTC TACATGTCTT TTCATATTTT
TATCTTCTTG AAGTCCCTCA GAAACCTAAG GTCTCCTTGA ACCCTCCATG          2600
     [exon 4: 2564..
GAATAGAATA TTTAAAGGAG AGAATGTGAC TCTTACATGT AATGGGAACA
ATTTCTTTGA AGTCAGTTCC ACCAAATGGT TCCACAATGG CAGCCTTTCA          2700
GAAGAGACAA ATTCAAGTTT GAATATTGTG AATGCCAAAT TTGAAGACAG
                                   G
TGGAGAATAC AAATGTCAGC ACCAACAAGT TAATGAGAGT GAACCTGTGT          2800
                                A
ACCTGGAAGT CTTCAGTGGT AAGTTCCAGG GATATGGAAA TACAGATCTC
               ..2818]
TCATGTGAGG GATGGCTCAT CTGAAGATGG GAAAAAACAG GTTATTCCAA          2900.
GGGTTAGGAC ACCAGAGTGG GATTCAAGGC CTCTCATTTT TAAGACCCCT
                              C
GCATTGGCTG GGCACAGTGG CTCACGCCTG TAATCCCAGC ACTTTGGGAG          3000
                                             A
GCTGAGGCAG GTGGATCACG AGGTCAGGAG ATCGAGACCA TCCGGCTAAC
                                              A
ATGGTGAAAC CCCATCTCTG CTAAAAAATA TATATATATA AAATTAGCCG          3100
GGCGTAGTGG TGGGCACCTG TAGTCCCAGG TACTCGGGAG GCTGAGGCAG
GAGAATGGTG TGAACCCAGG AGGTGGAGGT TGCAGTGAGC TGAGATCACG          3200
CCACTGCCCT CCAGCCTGGG CTACAGAGCA AGACTCCGTC TCAAAAAATA
AATAAATAAA TAAAAAAGAC CCCTGCATCT CTTTTCTTCT ACCCCCTTCC          3300
CTTTTGATTA CTTGTATGCC TTCTTTCAAT ATTCTAGTCA TCTCTCAATA
TTATTCCTCC ACCCTATTTT CCTCTATCTT TTCTGCCTAG ATTCAGGTAT          3400
ATATTATGTG GTCAAACAGC ATGACATATA TGTGAACATT TCAAAGAGCT
GTGTATCTGG AATAGGATCA AAAGGTTTGA CTTAAAGTTT TGCTCTGCAT          3500
AATCCATATG GCAGGACCTG AATATTAGGT TGTACTCTTC GTTATGAAAC
ATATCTGGGT ACATTTCCTT ATGTCCTCTG TTGTTACTTA AGAACACATA          3600
TTTCATGCTT GTTTCATTTT TATCACTCCT ACTGCCAACA AATAGCATAG
CATGCTTAGG CACATGTGGC TTAATTAGCA AATGTTGAAT AAACAAATTA          3700
ATGATTTTGA ATAGTGACCA ATAGGTCTCT TTTATACTCT ATATTTTTCT
CTTGAGTGAA AAAAAATGTT TCAACCTCCA TATGTAAATT CCAAACACAA          3800
ACTAAAGCAA TGTAGAATAG CTTCTTTATT CCCTGGAGTA GGTTCTAGAG
AAGTCCTAAA GGATTGGTCC TAAATTAATT ATGCTTATTA TGCTAGCGAT          3900
ATTTCCTTTC AAAATTCTCC TTTAATGAAT GCTTTTTAAT TTTTACAAAA
GCATTAACCA TAGAATGTGA TTCTTGTCTT TCACTGACTC ATTAGTGACA          4000
AATATTTGTT GAGTACCTAC CAACTCCTAA GTATTGCTAC CAACTCCTAA
ATACTGTGTT GGGCATTCAG AATAGAATGT AGAACTAGAC AGGGTCCCTG          4100
ACTTCTTGGA GCACAGAGCA GTATGGGAAG AGGACATTAA ATAAAGAATT
ACATAAGTAA TTAATTTAAA TTATACATGT TTTGAAGAAG TTTTTTTTTG          4200
ACAACTATAA TTAACACTAG AACTGGGAAG TTTCTATAAG GTAAGAGAGG
ACAAAATAGA CACTCTCCTA AGCTAAAATT CCCAAGAAAG ACTGTTTATT          4300
TTCCCCTAAC TAACTAGAAC TAGCAACAGA AGATCTGAAA GGAATTCTGG
```

FIGURE 1B

```
CTTTCAAGTG TTCCATGTAT GGACTCATCA GGGAGGTCCG AGAGGCTTTG          4400
TGGCCCCAGA CTGACTTTTC AGGAGGGGAA AGGATTTATC AATACACAAG
ACAGGCTCTA AGCATTATTT TGTGCCCTTT AAAAATCCAC TTTATGAGCC          4500
AAAAAGTGAG TTAATGATAA TTCATAGTTT CTGACACATG CTCTATGCGT
GGCTCTCTTT TCTCTATTCA TTCTCTCTCT CTTCATTTAT TGTTAAATAA          4600
A
ATAATGTAAT GAATGTTCTT CAGACTGGCT GCTCCTTCAG GCCTCTGCTG
        [exon 5: 4624..
AGGTGGTGAT GGAGGGCCAG CCCCTCTTCC TCAGGTGCCA TGGTTGGAGG          4700
AACTGGGATG TGTACAAGGT GATCTATTAT AAGGATGGTG AAGCTCTCAA
GTACTGGTAT GAGAACCACA ACATCTCCAT TACAAATGCC ACAGTTGAAG          4800
ACAGTGGAAC CTACTACTGT ACGGGCAAAG TGTGGCAGCT GGACTATGAG
                                   T
TCTGAGCCCC TCAACATTAC TGTAATAAAA GGTGAGTTGG TAAAGGAAAG          4900
              ..4881]
GAAAAGCATC CATAGCAGGG GAAGGAAGAG AGAACTTCTG AGCCTGAGCA
GTTGCAGCTT GTAGAAGGGG GGCACCTGTG ATACACTGGA AAGCCTACCA          5000
                                                   T
GACTTGCAAT GAGGAGACCT GGGTGATAGT ATATATCTCA ATCTCTGTTT
CAAAGCCTTG ACTTGTTAAA TGGTGATAGT AATACCTGCT TGCACTATGA          5100
                              C
AATTTTTATG AAGATTAATG TGGTAATATT TGTGAAATGA CTTTGTAAAC
TGTTAAGCAC TACCCAAGCA TAACAGATTG TGATTACTAT TTTGATCTCA          5200
AAGTCATCTG TTGCTCCTGG GGGAACACTT ATATTTATCA AATTGAAAAA
AAGTTTCAAA GTTGAATGAA GAAAGGATAT AAAGAGCTTG AGGAGCCCAT          5300
TCCAGCTTAG GAGGGCTGGG AAAGGAAACC AGCAAGTCAG TAAGCTGTGT
GCCTGTGTAT TGAGGGAGGA GGGAATGGAC TTGATATGGA GAGGGTAGGG          5400
AGGTGGACTG CCTCTATGGC CTGTAAGAAA AACTGCTCTC TCCAAACTCT
TTATAAGAGA GGGAGCCTGT GAAGTATTCA CTTTTGAAGG AGAAAGTTAG          5500
ACTTTTCCTT CACACACTTT GTACATAATA ATGTTTAAAA AAGCATGAGG
TCAAAATACA TAATTAAGTC CTAGCAGTTC TCTGTTAACT AATTTGAGAC          5600
TGAAGTGCTA TGTACTTGTC TCTAGGCTTC CAGTATCTTC ATCTGTAAAA
CAGAATATTT GGTCTAGATT CCATTAGAAT CATTTGATAA CTTAAAAAAT          5700
ATATTGATGC TCATGTCTCA TTTCTTGAGA TTCTGATTTA ATTGGTTTGG
GGTGCAGCCT GGGTATACGT ATTTTTCATA GGTCTTTCAC ATAATGGTAA          5800
TGGGTAGCCA ATATTGAGAA TCACTTGTCT AGGTGATCTT TAAATGATTT
CTGGATGTAA TATTCTGAGG CTCTATAATT TGAGACTAAT CACAAAAATC          5900
GGTACAGTTT ATAAACAGAC TAACAGAACC ACAAATAAT AGAATTGGAA
GGCAATTTAA CTAGTGCAAT TTCTTCATTT TGCCTAACAG GCATGTAAGA          6000
AATGATGATT GATTGAGTAA TAGGCATTGA TGACCCCTGT CCTCACTTTG
TCCCCTTTCC ACCCCTTAAT TATATGTGAA TTCTGGTCTT GTCATTTCGA          6100
ATAAGGGGTT TATCTTTCCT ATTGTCTTCC CCTCTGGGCA CGGCACACTG
GCTACTGGAG TTAAGAGGAA ATGCTTAGGA CTCCCTGTGG CTCCAGGGAG          6200
CACCAACAGA GCAACTCAAC CTAGTGTTAA TCTGAGTGTT TTCTCTGTGC
TTCTGGATGC CACATCACGC TAAAAATGAA GGACAAAGCT TGGTCTTTCT          6300
CTTAGGGAGG ATGAAACTCT GAACCTCATT TTTCAGTTCC CAAGATGAAT
TATGTTTCTC ATTGCATCTG TGTTCCACTA CAGCTCCGCG TGAGAAGTAC          6400
        [exon 6: 6384..
TGGCTACAAT TTTTTATCCC ATTGTTGGTG GTGATTCTGT TTGCTGTGGA
CACAGGATTA TTTATCTCAA CTCAGCAGCA GGTCACATTT CTCTTGAAGA          6500
TTAAGAGAAC CAGGAAAGGC TTCAGACTTC TGAACCCACA TCCTAAGCCA
                                         A
AACCCCAAAA ACAACTGATA TAATTACTCA AGAAATATTT GCAACATTAG          6600
              ..6568]
```

FIGURE 1C

```
TTTTTTTCCA GCATCAGCAA TTGCTACTCA ATTGTCAAAC ACAGCTTGCA
                   C                                  G
ATATACATAG AAACGTCTGT GCTCAAGGAT TTATAGAAAT GCTTCATTAA      6700
ACTGAGTGAA ACTGGTTAAG TGGCATGTAA TAGTAAGTGC TCAATTAACA
            A
TTGGTTGAAT AAATGAGAGA ATGAATAGAT TCATTTATTA GCATTTGTAA      6800
AAGAGATGTT CAATTTCAAT AAAATAAATA TAAAACCATG TAACAGAATG
CTTCTGAGTA TTCAAGGCTT GCTAGTTTGT TTGTTTGTTT TCTACTAAAG      6900
GCAAGGACCA TGAAGTTCTA GATTGGAAAT GTCCTCTCTT GACTATTGCA
AGTGCGATCT AGGAATGAAA AGACATAGGA GGATGCCAGT GAGGTGGATC      7000
ATTTTTATGC TTCTTCTTCA GCTTACTAAA TATGAACTTT CAGTTCTTGG
CAGAATCAGG GACAGTCTCA AGACATAGGA CTCTCAGGAT GAAGTAGAGT      7100
CCAGGATTCC TCTGTGATTG TTTTGCCCCT CCCAAATTTA TATCTTGAAC
TTATGTCTTG TATCTTTATA CAGCACCTGA ACCAAGCATT TTGGAGAAAT      7200
TCCAGCTAAT AATAATAACC AAAACCTTCG GCTCTGAAAA CAGTCCAGGA
CTGAATAAGA TCTTGGGCAA AAGAACTAGA CAGTTTTGGT TTATTTTCCC      7300
TTTCATTTTA TGTCTTCATC ATAGTCATTG GAGGCTCATT CTTCTTGTCA
TGGAGTAAAT GGGATTAAAG TT                                   7372
```

FIGURE 1D

POLYMORPHISMS IN THE CODING SEQUENCE OF FCER1A

```
ATGGCTCCTG CCATGGAATC CCCTACTCTA CTGTGTGTAG CCTTACTGTT
CTTCGCTCCA GATGGCGTGT TAGCAGTCCC TCAGAAACCT AAGGTCTCCT        100
TGAACCCTCC ATGGAATAGA ATATTTAAAG GAGAGAATGT GACTCTTACA
TGTAATGGGA ACAATTTCTT TGAAGTCAGT TCCACCAAAT GGTTCCACAA        200
TGGCAGCCTT TCAGAAGAGA CAAATTCAAG TTTGAATATT GTGAATGCCA
AATTTGAAGA CAGTGGAGAA TACAAATGTC AGCACCAACA AGTTAATGAG        300
G
AGTGAACCTG TGTACCTGGA AGTCTTCAGT GACTGGCTGC TCCTTCAGGC
 A
CTCTGCTGAG GTGGTGATGG AGGGCCAGCC CCTCTTCCTC AGGTGCCATG        400
GTTGGAGGAA CTGGGATGTG TACAAGGTGA TCTATTATAA GGATGGTGAA
GCTCTCAAGT ACTGGTATGA GAACCACAAC ATCTCCATTA CAAATGCCAC        500
AGTTGAAGAC AGTGGAACCT ACTACTGTAC GGGCAAAGTG TGGCAGCTGG
                              T
ACTATGAGTC TGAGCCCCTC AACATTACTG TAATAAAAGC TCCGCGTGAG        600
AAGTACTGGC TACAATTTTT TATCCCATTG TTGGTGGTGA TTCTGTTTGC
TGTGGACACA GGATTATTTA TCTCAACTCA GCAGCAGGTC ACATTTCTCT        700
TGAAGATTAA GAGAACCAGG AAAGGCTTCA GACTTCTGAA CCCACATCCT
                                                 A
AAGCCAAACC CCAAAAACAA CTGA                                    774
```

FIGURE 2

ISOFORMS OF THE FCER1A PROTEIN

```
MAPAMESPTL  LCVALLFFAP  DGVLAVPQKP  KVSLNPPWNR  IFKGENVTLT
CNGNNFFEVS  STKWFHNGSL  SEETNSSLNI  VNAKFEDSGE  YKCQHQQVNE      100
                                        R
SEPVYLEVFS  DWLLLQASAE  VVMEGQPLFL  RCHGWRNWDV  YKVIYYKDGE
N
ALKYWYENHN  ISITNATVED  SGTYYCTGKV  WQLDYESEPL  NITVIKAPRE      200
                            M
KYWLQFFIPL  LVVILFAVDT  GLFISTQQQV  TFLLKIKRTR  KGFRLLNPHP
                                                        K
KPNPKNN                                                         257
```

FIGURE 3